

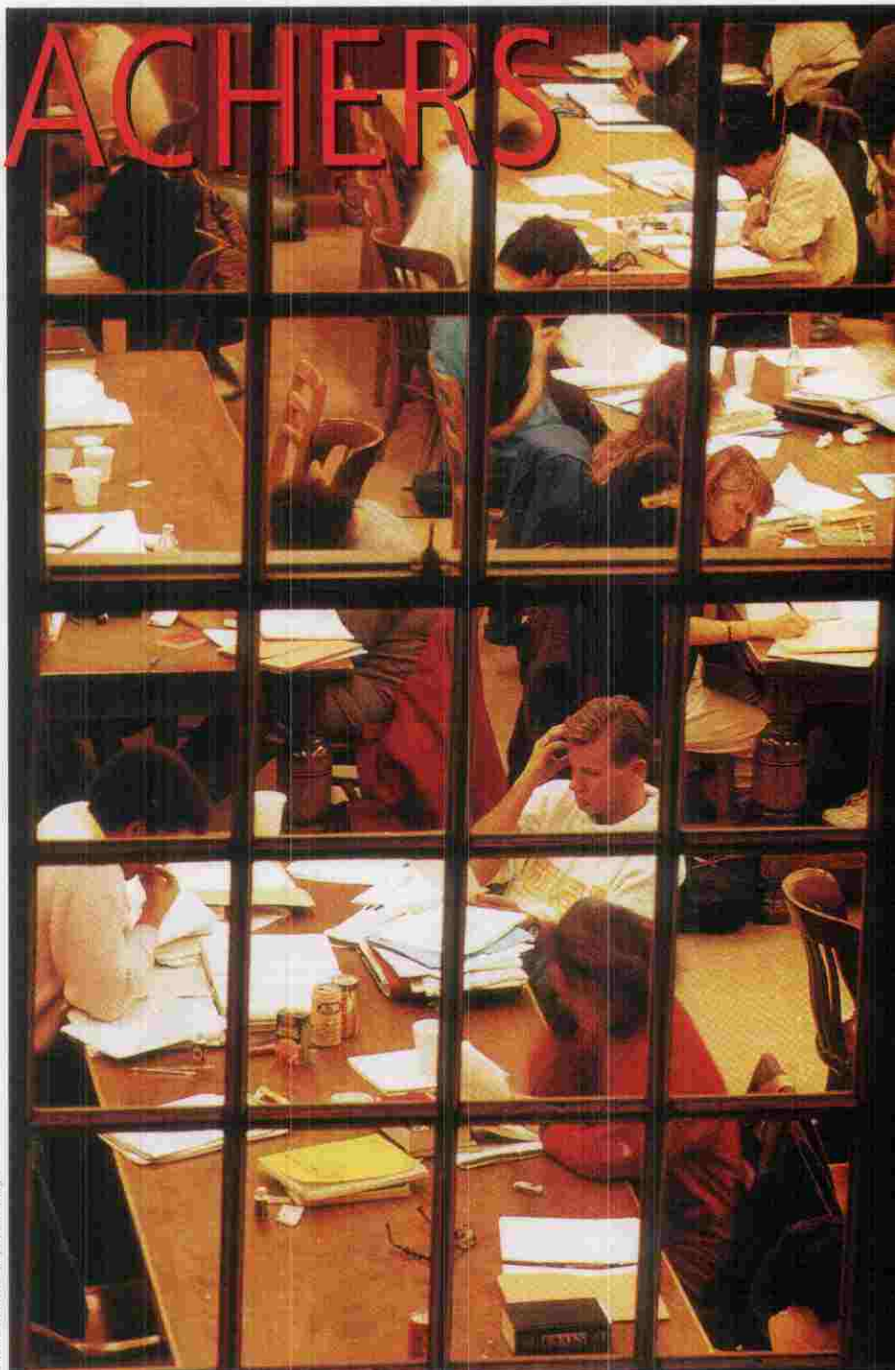
What the Tests Tell Us About NEW TEACHERS

Schools are struggling to meet demands for academically talented and ethnically diverse teachers. Who are the new teachers? Researchers at ETS and ACT conducted a national study to find out.

Andrew S. Latham, Drew Gitomer,
and Robert Ziomek

Researchers have expressed serious concerns about the academic ability of teachers since at least the 1920s, often citing the fact that high school seniors who intend to major in education have consistently earned lower scores on standardized tests than their college-bound peers. Why have those students who profess an early interest in education traditionally lacked the academic abilities of students interested in other professions? For one reason, teaching has never received the respect and remuneration accorded most other occupations.

Other, more recent concerns about the teaching force are also commanding attention, including the growing demand for teachers and the gender and ethnic homogeneity of the teacher workforce. Most predictions place the demand for new hires above 2 million over the next decade, or more than 200,000 teachers a year, far exceeding the number of potential teachers produced by colleges of education. Further, nearly 9 out of 10 public school teachers are white, and approximately 3 in 4 are female (Feistritzer, 1996). The mismatch between the diverse population of students and the relatively homogeneous population of teachers makes it difficult for all students to have role models in school with whom they can readily identify.



The Teacher-Testing Controversy

In response to concerns about the academic preparedness of teachers, the teacher-testing movement grew explosively in the 1980s and the 1990s; today almost all states have some sort of teacher-testing requirement. The teacher-testing movement remains highly controversial, however. By design,

testing requirements restrict supply; desperate to fill vacancies, many states have circumvented such requirements by granting emergency licenses. Moreover, minority candidates have traditionally scored less well than their white peers on standardized tests, leading to fears that teacher testing will deny a disproportionate number of minority candidates access to the profession. Some view the situation as one in which states must decide between raising academic standards or increasing supply and diversity, with the decision in favor of one necessarily coming at the expense of the other.

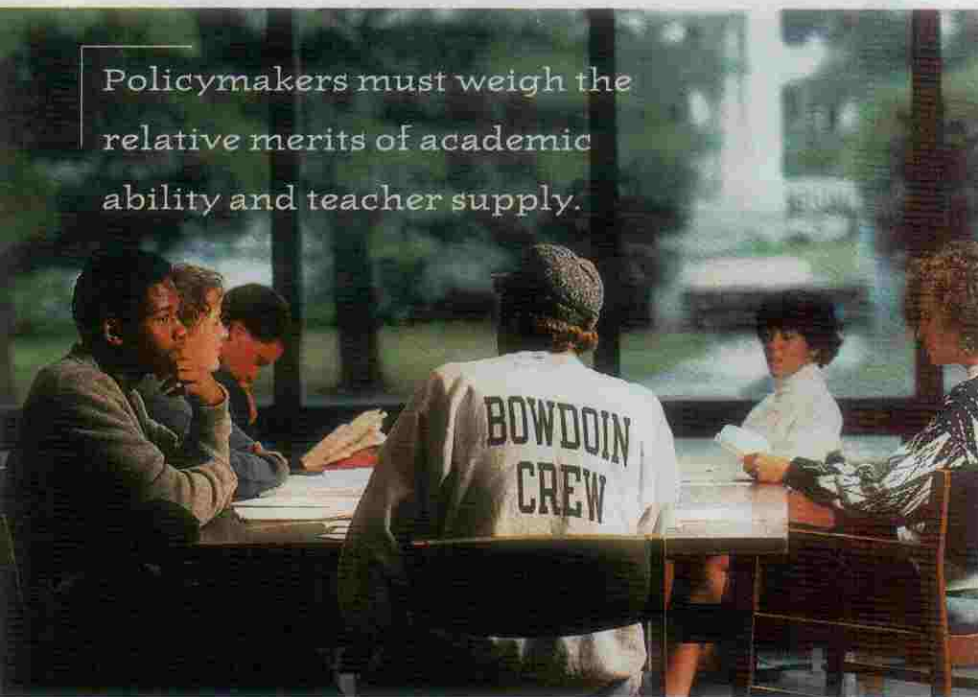
To inform this debate, Educational Testing Service (ETS) and ACT have undertaken a research study that examines the profile of those who are now seeking a teaching license. The study examines the SAT and ACT scores of candidates who took a test from ETS's Praxis Series for teachers in 1995-1997.

The Praxis Series consists of Praxis I tests, which assess reading, writing, and math ability and are generally required for admission into a college of education, and Praxis II tests, which focus on content and pedagogical knowledge in specific subject areas and are used by states to grant initial teaching licenses.

predict teacher effectiveness? We do not mean to imply that candidates who perform well on these college admissions tests will automatically make good teachers or that someone who performs poorly on these tests cannot excel as a teacher. Clearly such scores do not present the full academic picture, but given the vagaries of undergraduate grading policies, they are the best academic proxy we have available for students as they enter and leave college.

There are at least two reasons to study the academic ability of teachers. The first is that if schooling is to be considered an academic enterprise, then it seems only logical that teachers be drawn from among the more academically able. A second reason to look at these standardized test scores comes from growing evidence that the verbal ability of teachers, as measured in their standardized test scores, is positively related to their students' test scores (Ehrenberg & Brewer, 1995; Ferguson, 1998). We concur with Weaver's sentiment that "it would be absurd to argue that academic ability is not or should not be at least one measure of teacher quality" (1983, p. 1).

Policymakers must weigh the relative merits of academic ability and teacher supply.



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At the same time, universities are restructuring teacher education programs. They are raising standards for admission, transforming curriculum, and increasing opportunities for clinical experience. Many require prospective teachers to major in specific content areas or offer alternative routes to licensure, in contrast to the more traditional path to licensure through the education major.

All these changes have not reduced the controversy around finding the optimal balance among teacher academic ability, supply, and diversity and the reforms that will help achieve this elusive balance.

A majority of the Praxis II candidates never were required to take the Praxis I assessment. By looking at the academic and demographic profiles of Praxis I and II candidates, the study seeks to quantify the academic ability of the teaching force at critical stages in the preservice pipeline and to ascertain the role that licensure assessment plays in shaping the teaching force.

Assessing Academic Strength

Why should we care about the SAT and ACT scores of teachers, when the SAT and ACT are designed to be one part of the college admissions process, not to

Who Takes the Praxis Tests?

Although the Praxis candidate population does not necessarily represent the national population of prospective teachers, 37 states and the District of Columbia use at least one test from either Praxis I or Praxis II. Thus the Praxis population represents a substantial portion of the potential teaching population.

Our 1995-1997 data file includes nearly 34,000 Praxis I candidates and more than 160,000 Praxis II candidates who had also taken the SAT. For both populations, the ratio of females to males was 3 to 1. Ethnically, the Praxis I population was 81 percent white, 11 percent African American, 4 percent Asian, and 2 percent Hispanic, suggesting that the pool of candidates applying to colleges of education does not reflect the diversity of the K-12 student population. Moreover, the teacher candidate population becomes even more homogeneous when candi-

dates actually apply for their license: Nearly 85 percent of the Praxis II candidates were white, and only 7 percent were African American. These data strongly suggest that white women will continue to constitute a large majority of the teaching population in the beginning of the 21st century.

Comparing Prospective Teachers with Other Students

How do individuals who are actually seeking licensure stack up with all SAT and ACT test takers? We looked at the average SAT scores of test takers who passed Praxis II and compared them

in education. We found that people who pass teacher licensure tests have academic skills that are comparable to or even slightly better than the skills of the overall population of people who take the SAT. In fact, when the results were broken down by ethnicity, the average SAT scores of all the candidates who passed Praxis II were far higher than the average scores by ethnicity for the entire SAT population. For example, African American SAT takers in 1997 averaged 434-verbal and 423-mathematics, but African American candidates who passed Praxis II averaged 463-verbal and 441-mathematics.

ethnicity. We found that passing rates for females and males were comparable. The story was quite different for ethnicity, however. On Praxis I, 82 percent of all white candidates passed, as opposed to just 46 percent of the African American candidates, with Asian and Hispanic passing rates falling in between. The gap between white and African American passing rates narrowed on Praxis II (91 percent versus 69 percent), but the gap between white and Hispanic candidates widened, with only 48 percent of the candidates classifying themselves as "Mexican, Mexican American, or Chicano" passing. Although the patterns vary somewhat between Praxis I and II, the overall message is the same: White candidates pass at a considerably higher rate than minority candidates.

Balancing Academic Ability and Teacher Supply

A third issue we studied was the extent to which raising the passing scores on Praxis I and II would alter the face of the teaching population. Throughout the educational reform movement, many have advocated making the content of teacher tests more challenging and raising the minimum passing scores as ways to improve the academic quality of the workforce (Shanker, 1996). Others fear, however, that raising barriers to entry in the profession will disproportionately limit the number of minority candidates who become teachers (Ballou & Podgursky, 1997).

It is important to recognize that every state sets its own passing standard. Passing scores vary quite a bit from state to state and are the subject of continued debate. We asked how the teaching population would change if every state had the same low passing score, using the lowest state passing score for a given test, or if every state raised its standards by adopting the same high score, using the highest state passing score for a given test.

The answer is essentially the same for both Praxis I and Praxis II: At the low passing score, passing rate gaps between ethnic groups drop, but so do

with baseline numbers found in *College Bound Seniors: A Profile of SAT Program Test Takers* (The College Board, 1997). SAT scores are reported on verbal and math scales, each of which ranges from 200 to 800. In 1997, the average SAT scores of all candidates were 505-verbal and 511-mathematics, but high school seniors who planned to major in education averaged only 485-verbal and 479-mathematics. ACT scores show a similar trend.

During the college years, however, the population of prospective teachers undergoes dramatic turnover; Hanushek and Pace (1994) estimate that more than half of all potential education majors switch career plans between their senior year in high school and the end of their sophomore year in college. Further, about one quarter of the current teaching force did not major in education (Feistritzer, 1996), so studies that look only at intended education majors neglect to account for a substantial, nonrandom sample of the teaching population.

Our solution to this problem was to look at the SAT and ACT scores of candidates who passed Praxis II, because they represent a better proxy for the eventual teaching force than do high school students planning to major

Overall, the picture does not appear nearly as grim as sometimes has been suggested. When we compared test scores for those seeking licenses in particular fields with the scores of appropriate comparison groups, we found that those who actually met teacher licensing requirements had comparable scores. For example, those seeking a teaching license in mathematics had standardized test scores that were comparable to the scores of high school seniors who intended to major in mathematics.

However, those seeking an elementary education license, the largest cohort of teacher licenses, have SAT and ACT scores that are substantially lower than the scores of those seeking licensure in specific content areas. The claims about relatively low SAT scores compared with those of many of their college peers still ring true for those seeking an elementary license.

Teacher Tests and Minority Candidates

What of the fear that tests bar excessive numbers of minority candidates from the teaching population? To answer this question, we looked at the Praxis I and II passing rates¹ by gender and

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the average SAT and ACT scores of the people who pass. High passing scores increase ethnic gaps, but significantly increase SAT and ACT scores as well. For example, at the low passing score for Praxis I, 67 percent of the African American candidates would pass, as opposed to just 17 percent at the high score threshold. The corresponding percentages are 95 percent and 52 percent for white candidates. These figures are especially worrisome given the current dearth of minority teachers.

However, if every state were to go with the high passing scores on Praxis I, prospective teachers' average math and verbal SAT scores would each climb more than 40 points higher than with

candidates applying for their teaching license, specifically those who pursue licensure in particular content areas, have reasonably strong academic skills, skills that are substantially higher than many previous researchers have suggested. The bad news is that the gender and ethnic composition of the teaching force does not come close to matching that of the K-12 student population and that this trend does not appear likely to change any time soon.

Admissions and licensure testing clearly raise the academic ability of the population by denying access to those with lower test scores. Without exception, we found that those who passed Praxis I and II tests had higher average

suggest that such testing holds great promise for ensuring that teachers are academically able. If not used judiciously, however, such testing can exacerbate already daunting problems with the supply of potential teachers. ■

¹ Each state establishes its own passing scores for every Praxis test. We defined passing candidates as those who met the passing score established for their particular test in the state where they took the test.

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Andrew S. Latham (e-mail: alatham@ets.org) works in the Licensure Development Group and **Drew Gitomer** (e-mail: dgitomer@ets.org) is Director of Research, Teaching, and Learning at the Educational Testing Service, Mail Stop 16D, Rosedale Rd., Princeton, NJ 08541. **Robert Ziomek** (e-mail: ziomek@act.org) is Director, Program Evaluation, Research Division, at ACT, 2201 N. Dodge St., P.O. Box 168, Iowa City, IA 52243-0168.

To assert that licensure requirements are responsible for the demographics of teaching is far too simplistic. Clearly, more powerful social and economic forces are at work.

the low passing scores. Policymakers thus face a vexing decision: They must weigh the relative merits of academic ability and teacher supply, particularly with respect to the supply of minority teaching candidates.

To lay all the blame for the ethnic homogeneity of teachers at the feet of teacher testing would miss the point, however. Our data show that at some point in the pipeline before Praxis I and II, the potential teaching population self-selects into one that is 81 percent white. So although teacher testing exacerbates the lack of ethnic diversity, the teaching force would not come close to representing the diversity of the student population even if passing rates for various groups were identical. To assert that licensure requirements are responsible for the demographics of teaching is far too simplistic. Clearly, more powerful social and economic forces are at work.

Good News, Bad News

Our data contain both good and bad news with respect to the teaching population. The good news is that

SAT and ACT scores than those who failed and that the higher the Praxis passing score was set, the higher the SAT and ACT scores of the passing population. Teacher testing thus appears to be working in the sense that it elevates the academic ability of the pool.

But if high standards are the wave of the future, and if passing scores on teacher tests are to rise, effective ways to increase both the overall supply of teachers and the relative percentages of minority teachers must be found, particularly in specific content areas. Policymakers have suggested many reforms in this vein, such as higher teacher salaries, targeted recruitment as early as middle school, rigorous but flexible alternative-route programs to lure mid-career professionals into teaching, and supportive induction programs to lower the attrition rates of novice teachers.

Although all these reforms sound good in theory, it remains to be seen whether these measures will be effective on a large scale. Until they are, policymakers must walk a tightrope with respect to teacher testing. Our data

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